

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

In the Matter of	)	
	)	
Unlicensed Use of the 6 GHz Band	)	ET Docket No. 18-295
	)	
Expanding Flexible Use in Mid-Band Spectrum	)	GN Docket No. 17-183
Between 3.7 and 24 GHz	)	

**REPLY COMMENTS**

## BACKGROUND

Riverside County, California - and its twenty-eight (28) incorporated cities absolutely rely on 6 GHz microwave radio relay links as the backbone in providing emergency radio communications. The county is 7,303 square miles with a population of 2.423 million and represents one of the largest county public safety radio systems in the United States. The microwave radio links provide the 7x24, mission critical connections between Law, Fire and EMS Emergency Dispatchers and First Responders throughout the county.

Without interference free 6 GHz microwave links, emergency dispatch and responses come to a halt. As the Commission knows, Public Safety Communications systems, including conventional

VHF Fire systems and 700 MHz\VHF trunked systems consists of numerous radio sites, often in rural or remote areas where no commercial carrier wirelines or fiber is deployed, thus mandating 6 GHz microwave links as the interconnectivity solution between remote radio sites and their central control systems. Frequently, multiple microwave hops that span 200 plus miles are deployed to facilitate the interconnections between radios sites and control and dispatch centers.

There is simply no alternative to the long-haul propagation realities offered by the 6 GHz spectrum, and the spectrum's long standing coordination process which insures interference free operations amongst similar users.

Each day, the County's population of approximately 2.4 million rely on a First Responder force of nearly 5,600 voice users and 1300 data users to provide life-saving and property protecting services across an area greater than 7,200 square miles. The County's 84 microwave sites, with the majority using 6 GHz and 11 GHz technology, serve in the front line to enable and safeguard that public safety mission, clearly contributing to the public good. Any interruption to the 6 GHz service breaks communication pathways which will delay, or in many cases halt, an emergency response. The response impact means a Law Enforcement Officer is not aware of a call for help on patrol, a Fire Fighter does not hear the call for a house on fire, or an EMT cannot be immediately dispatched to a person that has stopped breathing.

## II. REPLY COMMENTS

To echo the Joint Commenters of Los Angeles County, the City and County of Denver, The City of Kansas City, Missouri, Ozaukee County, Wisconsin, San Bernardino County, California, Regional Wireless Cooperative (RWC) and the Government Wireless Technology & Communication Association (GWTCA), the County of Riverside has microwave interests in the 6 GHz, and thus is extremely concerned about the potential of interference to these operations, which are crucial to public safety for residents and businesses throughout Riverside County.

As the Commission has previously encountered in the 800 MHz band, the discovering and mitigating public safety carrier interference is a complicated, burdensome and expensive proposition. Furthermore, since such interference if discovered after it occurs, it poses a grave danger to public safety.

The County of Riverside, in support of joint commenters, understands the Commission's interest in creating more carrier spectrum, but it cannot come at the risk of the public safety radio systems. Like other joint commenters, the County of Riverside has experienced two forced relocations in the past to accommodate such carrier interests for the 800 MHz rebanding of state mutual aid channels and the 2 GHz relocation to create PCS spectrum. It is critical that this decision take into consideration the impact to public safety radio systems and personnel.

The County of Riverside, in support of the Joint Commenters, is adamantly opposed to any "sharing" of the 6 GHz band in which the County's microwave links exist. The risk to public safety is simply too great. While the Commission recognizes in paragraph 9 of the NPRM that these

public safety links exist, the NPRM is devoid of any meaningful recognition of efforts, costs and consequences of interference to public safety operations. Indeed, footnote 47 appears to suggest that a numerical count of filers in support or opposition governs the Commission's decisions without regard to impacts to public safety operations. A simple numbers count cannot be the rulemaking standard.

Of course, we would all like to have additional wireless services available for a plethora of new services, as well as more efficient existing services. However, the Commission must recognize that the needs for public safety services rise above the need to stream more television shows. Entertainment needs must be balanced against safety. As a society, we must recognize that the continuing strain on public safety resources necessitates more efficiency in the delivery of public safety communication services, and the availability of spectrum is the single most important part of that effort.

The County of Riverside, in support of the Joint Commenters, appreciates that Automated Frequency Coordination ("AFC") systems create the potential for increased spectrum sharing. However, public safety should not be the innovation guinea pig. Interference from mobile devices is notoriously difficult to locate for mitigation. Increasing the opportunities for mobile interference within the band is an unnecessarily high risk when balanced against the need to stream the next viral video.

The Commission has only recently adopted final rules for the Citizens Broadband Radio Service



("CBRS"). Expansion of the CBRS system is premature, at best, particularly when the expansion is to include public safety spectrum. However, should the Commission choose to go forward and place public safety systems at risk, there must be the ability to render interfering units inoperable. The Joint Commenters also appreciate that the Commission has attempted to identify a methodology to mitigate interference when, not if, it occurs. Despite reservations of some, if the Commission is to place public safety systems at risk, there must be a mechanism in place to identify the source of interference.

However, merely having each unit transmit an occasional identification is insufficient. Even the proposed frequency identification is insufficient, as there is no proposed mechanism to determine the responsible party for the unit. Rather, unit registration with the AFC must also include inputting information tying the unit to a party responsible for the unit's operation. In this way, the hours and hours that public safety entities spend "interference hunting" can be somewhat minimized. The Commission has also failed to address the increased costs to public safety from having a new interference source to monitor. By way of reference, 800 MHz post-rebanding interference mitigation has cost the City of Oakland over a half million dollars.

Unfortunately, Oakland is not alone in encountering such interference, post-rebanding. These interference problems post-rebanding have occurred despite the presence of Section 90.697 of the Commission's Rules, which was specifically designed to address post-rebanding interference. Section 90.697 is the most advanced interference rule section ever created by the FCC. Unfortunately, Section 90.697 has failed to be effective at ensuring that interference does not occur and has failed to inhibit the imposition of significant costs on municipalities. The Joint

Commenters would support financial responsibility for such municipal efforts falling on the AFC, as it was the AFC's allocation of certain frequencies which caused the interference.

The Commission's Rules must also clearly define, with no room for a battle of the engineers, what will be considered interference, similar to what was adopted as Section 90.697 (albeit bit error rate must be included). Further, as with Part 90, it must be abundantly clear that the interfering unit must immediately discontinue operation. The AFC should also have the ability to disable units causing such interference, once properly notified.

### III. CONCLUSION

The 6 GHz spectrum is vital to the County of Riverside's Operation. Any interference will affect our public safety answering point (PSAP) operations. The County is very concerned that the Commission is re-writing the rules, allowing unlicensed devices to cause interference to current operations and keeping us from expanding in the future as the County grows.

Respectfully submitted,



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